Millennium I

USER'S MANUAL

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CE

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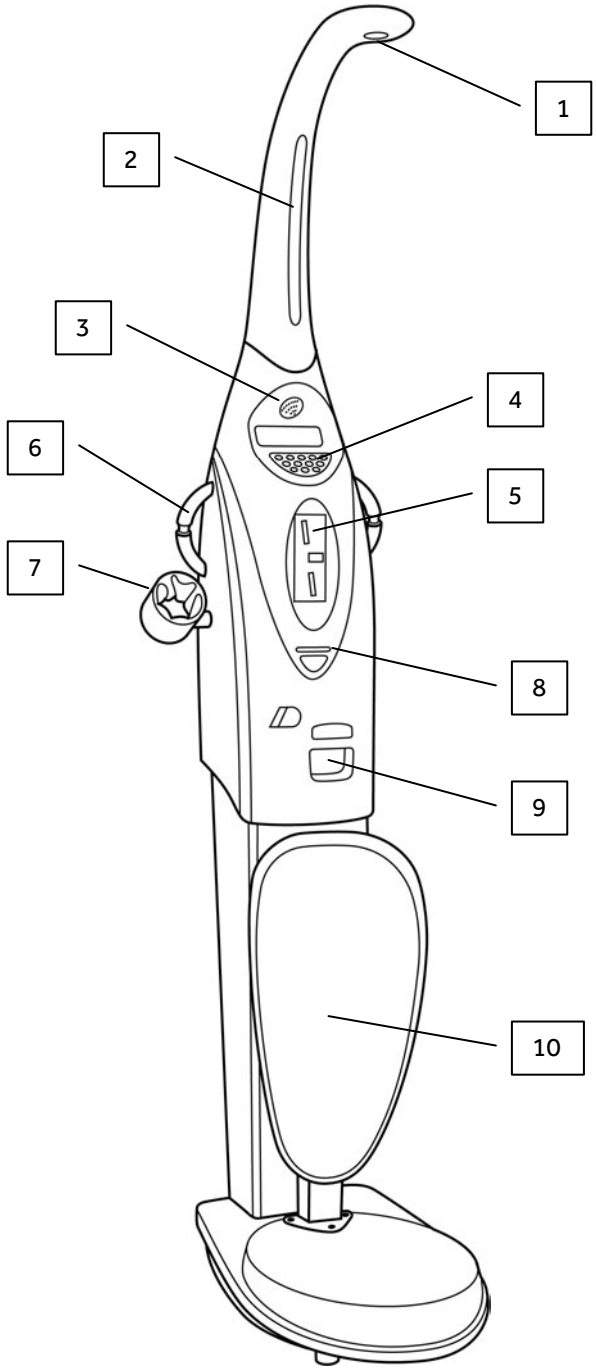
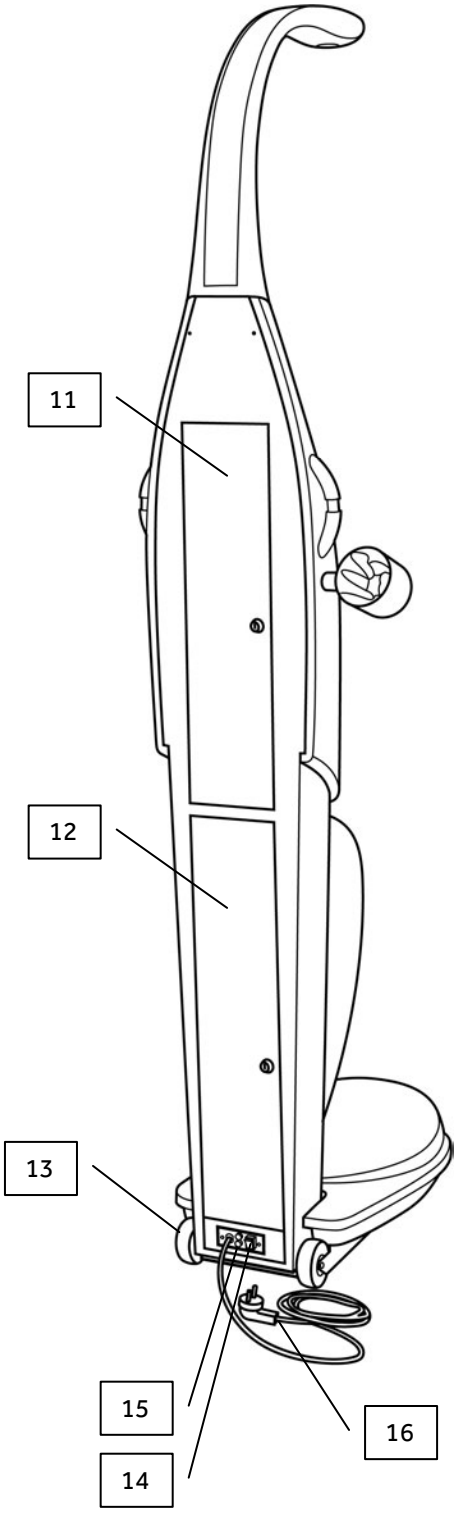
1. DESCRIPTION





(1) Height meter sensor
(2) Height meter arm and leds
(3) Speaker
(4) Keypad
(5) Coin slot
(6) Body fat sensors
(7) Blood pressure wrist cuff
(8) Smart card reader
(9) Ticket tray
(10) Baby scale (optional)

(11) Access door for paper roll changing.
(12) Access door to coin box
(13) Wheels
(14) Power switch
(15) Fuses
(16) Cable

2. INSTALLATION

MILLENNIUM I multifunction scale comes factory configured according to the voltage of each country and is ready for operation immediately after unpacking.
Connect the device to the power supply via the power supply cable. It is necessary that the outlet is provided with grounding. Adapters should not be used without grounding.

2.1. LOCATION AND SETTING

Set the equipment in a place flat and level, where it is perfectly supported. This last point is of vital importance to proper operation.
Make sure that within a radius of 70 cm around the equipment there is no interference that might affect the measurement of height.

2.2. UNPACKING

- Place the scale vertically.
- Remove the protective cap and the packaging that protects it. Do not use sharp tools, as this may damage the equipment.
- Place it on a level surface.
- Read the instructions carefully before connecting the multi-function equipment MILLENNIUM I.

Inside the packaging you will find:

- Multifunction equipment
- Height rod
- User Manual
- Coin drawer key, printer access key
- 1 Keychain
- 2 screws for stadiometer
- 1 roll of thermal paper
- 1 axis roll
- 5 card chip
- 1 blood pressure cuff

2.3. STARTUP

- Connect the equipment to the power supply.
- Check that no objects are placed on the platform of the equipment.
- Actuate the switch on the bottom.
- At this point the equipment will perform the process of self-test.
- Step away from the equipment to not interfere in the process of auto-zero of the systems of weight and height.
- If the process of self-test completes successfully, the screen displays the price of the service and the current time.

3. OPERATION

MILLENNIUM I multifunctional scale has 2 operating modes according to the measures to be undertaken:

- **Partial Mode:** Measuring weight, height and body fat index.
- **Total Mode:** Measuring weight, height, blood pressure and body fat index.

For each mode there is a price list, thus having a price for the partial mode and a price (usually higher) for the total mode.

The order of operation is as follows:

- **Partial Mode:** Weight and height, body fat index.
- **Total Mode:** Weight and height, blood pressure, body fat index.

When you turn on the multifunctional scale using the switch on the bottom, a test begins. This test performs the tare weight, height and pressure. The sequence of messages on the display is as follows:

- DAVI Y CIA, indicates the name of the manufacturer, begins the process of self-calibration.
- CONTROL YOUR WEIGHT PERIODICALLY on the top line (display advertising) and in the lower left corner a zero "0" plus the time and date. The zero "0" indicates that the equipment has made the tare and is ready for use.

3.1. PRICES

If the user step onto the platform before introducing the price amount, it appears the following message:

- INSERT € XX, XX TO WEIGH
- INSERT € XX, XX FOR BLOOD PRESSURE AND WEIGHT

Where X is the amount and € is the currency unit.

Because there are 2 possible prices depending on the desired mode (partial mode, total mode), the display shows alternately the 2 prices.

When you enter the amount and it is less than the total mode but matches the partial mode appears:

- PRESS <start> TO WEIGH
- INSERT € XX, XX FOR BLOOD PRESSURE AND WEIGHT

Donde X es el importe y € es la unidad de moneda.

The green <start> button is lit. By pressing <start> we access the partial mode. If we introduce the remaining amount to reach the total mode, this is automatically activated.

The green <start> light blinks for 20 seconds, if after this time we have not pressed the button <start>, the partial mode is automatically activated.

3.1.1. Using smart cards

The main use of the smart card is as prepayment system and storage of the results from the measurements that the user performs on the equipment. In one part of the smart card's memory is stored the **credit** and **number of the equipment where the card belong**s and on another part is stored the **last 10 measurements** of weight and blood pressure with the date on which they were made.

The card is for personal and individual use, since it stores data from the last 10 measurements of weight and blood pressure. When the card runs out of memory space for the 10 measurements, it deletes the first, so you always have the most recent 10.

Operation

By introducing the smart card, appears a screen indicating its credit.
If the card credit is higher than the price of the programmed options, you can select the one you want to perform, following the indications.

```
        YOU HAVE 05.00 €
   Select using the keyboard:
<start>: Weight & height,  0,50 €
<stop> : Weight & BP,      1,00 €
```

On this screen, select the service you want.

When you select either option MILLENNIUM I subtracts the amount of the service into the smart card and starts the measurement process automatically.

Buy credit

If your credit is less than the minimum price of the service, the following screen appears to us to buy more credit.

```
  >>DO YOU WANT TO
 RECHARGE YOUR CARD
  YES:     <start>
  NO:      <stop>
```

By confirming the charge we can introduce the coins to increase our credit. The accumulated amount is displayed.

```
    TIENE: ##.##€

-INTRODUZCA MONEDAS-
  CONFORME: <start>
```

To finish, push the <START> button. The new credit is automatically recorded on the smart card and we can remove it from the equipment.

3.2. WEIGHT AND HEIGHT

Before starting the measurement, appear on-screen instructions for the correct posture we must take (step up to the platform, stand straight). After a few seconds, the measurement is carried out automatically.

IMPORTANT: By failure to follow directions, the measurement result could be altered.

At the end of the measurement, the result values are displayed, in addition to the calculation of the Body Mass Index (BMI)

3.2.1. Using the baby scale accessory

Preparation and precautions

- Raise the cradle of the baby scale
- Before placing the baby in the cradle, press it with your hand to ensure that it has been blocked
- While weighing the baby, watch his movements to prevent him falling from the cradle

Measurement

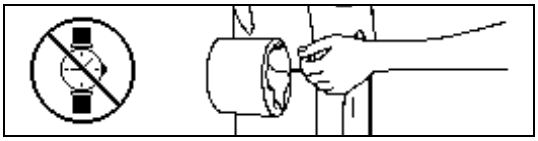
To weigh the baby, use the measurement option "Weight and height" as you would with an adult. The equipment detects that it is a weight below 15 kg, understands that we are weighing a baby then:

- The divisions are 10 g
- Only measures the weight, does not measure the height
- Overrides the process of measuring the body fat
- Gives us a baby scale ticket

The baby scale ticket contains a table of weights according to age and complexions ranging from 0 to 24 months old and is divided into 3 sizes: small, medium and large. It is divided by sex and always shows the 3 months which correspond to the weight of our baby.

3.3. BLOOD PRESSURE

To measure the blood pressure we must introduce the wrist without a watch in the cuff of the equipment, as indicated in the figure.



To start the measurement press the START button.

An acoustic signal is heard, the cuff inflation process begins, the display shows:

```
PLEASE DO NOT TALK OR MOVE
```

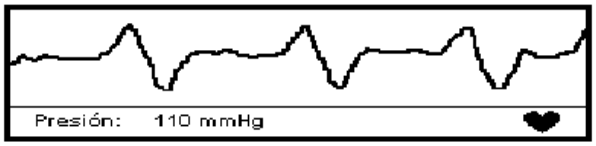
The cuff inflates up to the pressure 250 mmHg. If the swelling lasts more than 20 seconds, we are in a process of error and the equipment displays:

```
OUT OF SERVICE, CALL THE MAINTENANCE
```

If pulses are detected, the bracelet swell to 300 mmHg. If still more pulses are detected, MILLENNIUM I stops the swelling and the display shows:

```
ERROR DETECTION, REMOVE THE WRIST
```

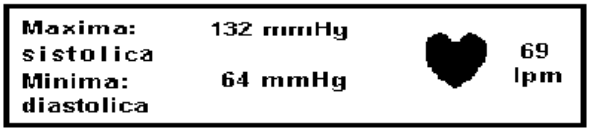
If no pulses are detected for 5 seconds, the pressure will automatically begin to decrease at a rate of about 3 mmHg / sec, simultaneously with the detection of each pulse appears a heart drawn on the screen and you hear a beep that accompanies it. The graphical display shows the heart rate.



If the cuff pressure falls below 40mmHg, we are in an error state, MILLENNIUM I stops the process and displays the following message:

```
ERROR DETECTION, REMOVE THE WRIST
```

When it does not detect more beats, the heart stops flashing and proceeds to a rapid deflation of the cuff. Then the result values are displayed on the screen:



WARNING: Do not self medicate on the basis of measurements made with the equipment.

3.4. BODY FAT

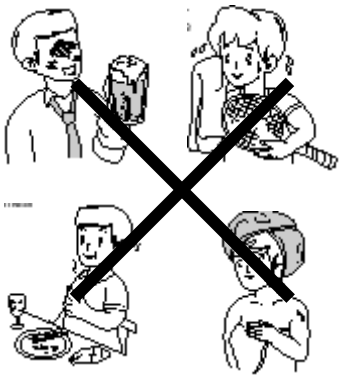
Limitations o f use

People affected by the following situations may have a degree of water content and bone density below average, which can cause inaccurate calculation of the percentage of body fat. In these cases the equipment can not provide accurate indication of the percentage of body fat.

- Children
- Elderly and postmenopausal women
- Bodybuilders and professional athletes
- People who developed a cold or fever
- People with edema
- People with osteoporosis or low bone density
- Pregnant
- Patients on dialysis

Furthermore, due to varying water content in certain circumstances, avoid the use of Body Fat Index:

- Immediately after making energetic exercise
- After a sauna
- After the bath
- After drinking alcoholic beverages
- After drinking lots of water or after eating (it is advisable to wait 1 or 2 hours)
- During the menstrual cycle



Precautions

Although there are no known side effects, Body Fat Index should not be used in the following cases:

- During an acute contagious disease
- In people with medical implants (eg a pacemaker)
- In people with abnormal blood pressure or any heart disease

Input data

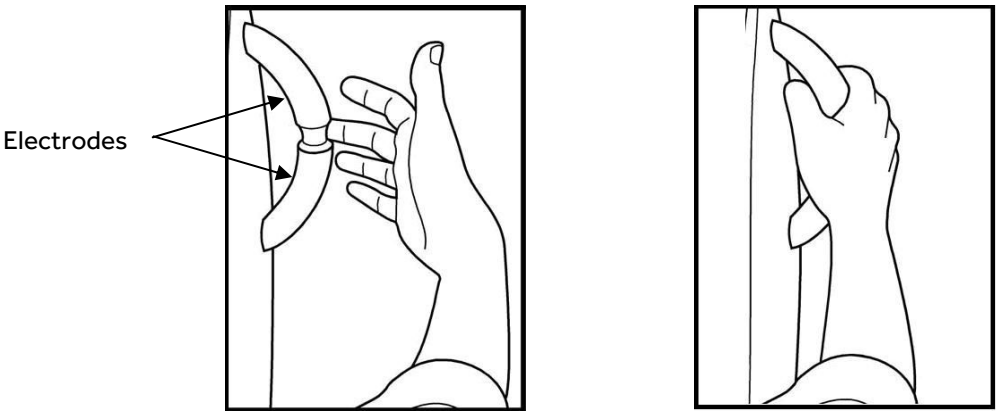
To calculate your body fat you need to enter some input, which must be within the following ranges:

- Weight: 60.0 kg to 225.0 kg
- Height: 160 cm to 205 cm
- Age: 10 to 99 years

Otherwise, the equipment ignores the process of calculating the body fat.

Holding and correct posture for measurement

To ensure that the measurement is accurate you should hold the device correctly as it appears:



It is VERY IMPORTANT:

- The palms make the greatest possible contact with the electrodes of the equipment.
- Press electrodes firmly with the palm of your hands.

The equipment does a measurement of the resistance of our body through the 4 electrodes. If contact with the electrodes is not right or the hands are wrongly placed on the sensors, the resistance value will not be correct which may lead to an inaccurate calculation of the percentage of body fat.

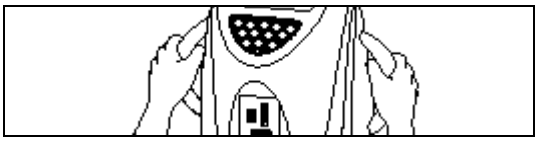
The resistance value must be between 390 and 1200 Ohms.

Measurement

The measurement of body fat index is optional. If the user steps off the platform, the equipment will override the measurement of body fat index.

IMPORTANT: People with implants, pacemakers or other electronic device for medical use should not use the measurement of body fat index.

To measure the body fat index, hold the lateral sensors with bare hands, clean and slightly moist, as it appears on the screen indications.



The display indicates when the measurement is complete and you can take your hands off the sensors.

The equipment takes into account the following user data to output the result values:

- Age
- Sex
- Complexion (optional, depending on configuration)

If not using a smart card, you must enter the data using the computer keypad. Follow the instructions on each screen to correctly enter each of the requested data.

If you use a smart card, your data should be already stored in the memory of the card, in which case you only shall be asked to confirm it, using the equipment keypad.

Finally, the display shows the values obtained according to the measurement and data entered by the user.

3.5. PRINTED RESULTS

Upon completion of the selected measurements, the equipment automatically prints a receipt with the obtained results including the recommended values for each measurement performed.

4. SETUP

4.1. PROGRAMMING

With the equipment turned off, press the button PULS1 (see Figure 1), hold down the button PULS1 and turn on the equipment MILLENNIUM I. After a few seconds, release the button. The display shows the test and adjustment menu.

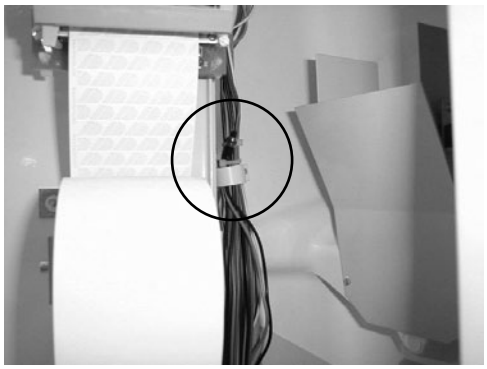


Figure1

Open the top door.

At the paper roll level, along with the wires, there is the button PULS1

Displays the following menu screen:

```
>TEST AND ADJUSTEMENT<  (stop:exit)
1-DISPLAY   2-KEYBOARD
3-PRINTER   4-WEIGHT AND HEIGHT
5-BP        6-PROGRAMMING
```

Press the key 6 (Programming) and appears the following screen:

```
.........TIME.........
            ↕↕
←         start         →
```

Using ← and → keys corresponding to "2" and "4" respectively we move through the menu options available. To select the desired option, press the button <START>. To exit press the button <STOP>.

The options that are accessed through the basic programming menu are:

HORA	Time setting
FECH	Date setting
TCKT	Ticket programming
PUBL	Programming screen advertising
VOZZ	Activation / deactivation of the voice
P-PR	Programming price of weight. Partial mode.
T-PR	Programming price of blood pressure. Total mode.

Confirmation of the process

After programming any data in the MILLENNIUM I, it verifies that the data are well introduced, if everything is correct, the data are stored in memory and the following screen appears:

```
** correct **        <tec>
```

Indicates that the process is correct, pressing any key returns to the main menu.

If the process is incorrect, the following screen appears:

```
   !!! E R R O R !!!      <tec>
```

The information you entered is not correct and does not record any data, pressing any key returns to the main menu.

Key performance

Programming is done using the main keyboard, the keys have several functions, numbers and letters.

By pressing the numeric key more than once, it appear the different programmed characters. The set of characters available in the MILLENNIUM is that related below, whose order of appearance is as follows:

```
1     A B C a b c Ä À á à ä â Ç ç
2     D E F d e f È   é è ë ê
3     G H I g h i     í ì ï î
4     J K L j k l - : ; < = > ? ½ @
5     M N O m n o Ö ó ò ö ô   Ñ ñ
6     P Q R p q r [ \ ] ^ _ ` { | }
7     S T U s t u Ü   ú ù ü û      ¡
8     V X W v x w ª º ,   ∏
9     Y Z * y z ÿ
0     "blank" ! " # $ % & / ( ) ∅ + , - .
```

How are they used?

Pressing the key once displays the first character. For the following characters, press more times until the character is displayed, for example:

To program the letter C
Press "1ABC" four times → C

IMPORTANT!
To use a different character of the same key we need to confirm with <start>, for example:

To program the letters AB
Press the "1ABC" twice → A
Press <start>
Press the "1ABC" three times → B

4.1.1. Time setting

If you select the option **HORA**, the display shows the following message:

```
TIME:              [hhmm]
HORA>
```

Where [hhmm] indicates the format in which we enter the new time. Enter the data using the alphanumeric keypad first hour and then the minutes, enter the hours in the format of 0 to 24 hours.

If we want to enter the 3:35 pm, type out: **1535**

Upon completion, we will press <START> to confirm the data.

4.1.2. Date setting

If you select the option **FECH**, the display shows the following message:

```
DATE:          [ddmmyy]
FECH>
```

Where [ddmmyy] tells us in which format we must enter the new date. Introduce the data using the alphanumeric keypad: day, month and year in that order with two digits for each input.

If we want to enter March 23, 2005, type out: **230305**

Upon completion, we will press <START> to confirm the data.

4.1.3. Programming advertising

With this option we can program a text, which will be displayed in the form of fixed messages distributed on 5 screens. To set the message we have a total of 99 characters, bearing in mind that spaces are also considered as a character.

If you select the option **PUBL**, the display shows the following message:

```
ADVERTISING:          [text]
PUBL>
/:0000/      ←→     stop:end
```

Option "advance" *Finish*

←→ It tells us that we can use the option to advance characters. Using the (←) and (→), key (2) and (4) respectively, we can retrieve the text already entered, so that we can move forward or backward with the text to arrive at the desired point. When finished, press the key <STOP>.
Stop End key. If you do not want to use the advance option, press the button <STOP> directly.

Pressing <STOP>, the display shows:

```
ADVERTISING:          [text]
PUBL>F
/:0000/ 0..9 2DEFdefÈ éèê
```

Now we can introduce the desired text using the alphanumeric keypad.
After entering all the text, we will press <START> to confirm the data.
The following screen appears:

```
ADVERTISING:          [text]
PUBL>
    Start: ← →        stop:out
```

Pressing <START>: We return to the *advance option*
Pressing <STOP>: Exit the programming menu. The information is recorded.

4.1.4. Programming the ticket

If you select the option **TCKT**, the display shows the following message:

```
TICKET:          [nnT]
TCKT>
```

Where [nnT]: nn Line number (00 ~ 25)
T Character type (0 ~ 3)

We have 25 lines to program, 5 at the top of ticket and 20 in the bottom of the ticket.

There are 4 possible character types, according to the following:

Code	Sample	Character Type
0		Normal
1		Vertically expanded
2		Horizontally expanded
3		Doubly expanded

We will introduce the value of the line number and the character type, using the format [nnT]. For example if we want to program the line 0, and the character type 1, we introduce: **001**

Upon completion, we will press <START> to confirm the data.
The display shows:

```
TXT:  [.....]
TCKT>F
/L00(1):01/  2DEFdefÈ éèê
```

Líine 00 *Character Type 1* *Character count* *Set of characters*

On the screen we have all the information available, we can now begin entering the text of the line with the alphanumeric keypad.

Upon completion, we will press <START> to confirm the data.

To enter a blank line, it is necessary to program at least one character of the line as "blank".

4.1.5. Voice activation

Using this option, we activate or deactivate the voice module.

If you select the option **VOZZ**, the display shows the following message:

```
VOICE ACTIVATION:   [1=0N,0=0FF]
VOZZ>
```

Enter through the keyboard, the code of the desired option:
1 voice activated
0 voice deactivated

Upon completion, we will press <START> to confirm the data.

4.1.6. Programming price of weight

Using this option, program the price of Partial mode: weight, height and body fat index.

If you select the option **P-PR**, the display shows the following message:

```
WEIGHT PRICE:       [***]
P-PR>
```

Enter through the keyboard, the desired amount of Euro cents. For example, if the price is 0.50 €, we will introduce **50**.

Upon completion, we will press <START> to confirm the data.

4.1.7. Programming price of blood pressure

Using this option, program the price of Total mode: weight, height, blood pressure and body fat index.

If you select the option **T-PR**, the display shows the following message:

```
BP PRICE:           [***]
T-PR>
```

Enter through the keyboard, the desired amount of Euro cents. For example, if the price is 1.00 €, we will introduce **100**.

Upon completion, we will press <START> to confirm the data.

5. MAINTENANCE AND CLEANING

The only maintenance that can be performed by unqualified personnel is the change of paper roll.

Do not perform repairs on your own. In case of breakdown contact the Technical Support Service.

If the power cable is damaged, it must be replaced by the Technical Support Service or qualified personnel in order to avoid dangerous malfunctioning.

To ensure accurate results, the equipment MILLENNIUM I **requires an annual maintenance check that only authorized personnel from the Davi & Cia Technical Support Service can perform.**

Clean the unit using only a soft cloth. Do not use gasoline or any similar solvent.

5.1. CLEANING THE BLOOD PRESSURE CUFF

Clean with a cloth soaked in a mixture of water and detergent. To dry, use a dry cloth.

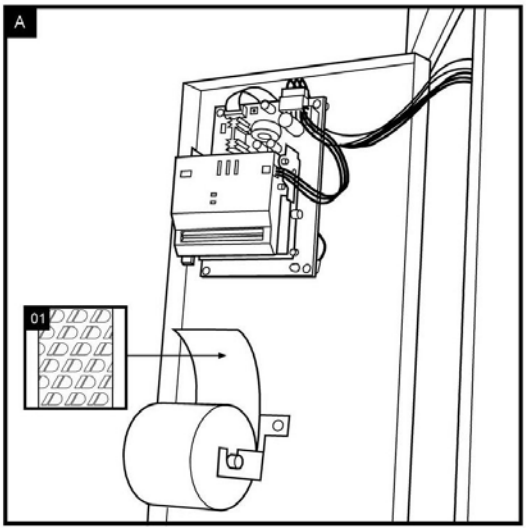
5.2. PAPER ROLL CHANGE

When the MILLENNIUM I runs out of paper, it stops working and the following message is displayed:

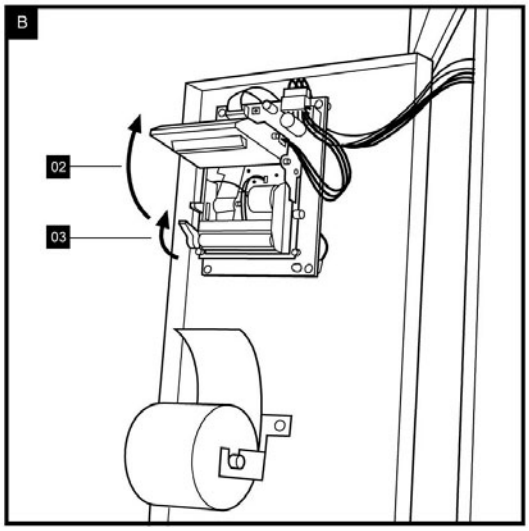
```
OUT OF SERVICE, NO PAPER
```

To change the paper roll:

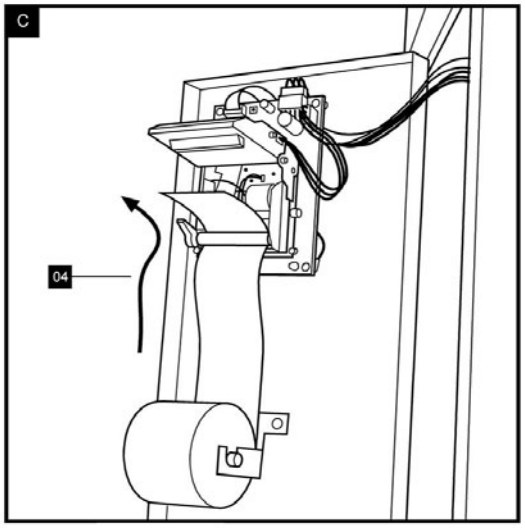
- Switch off the equipment
- Open the door to access the printer (see 1. Description - #11), the printer is inside at the top.

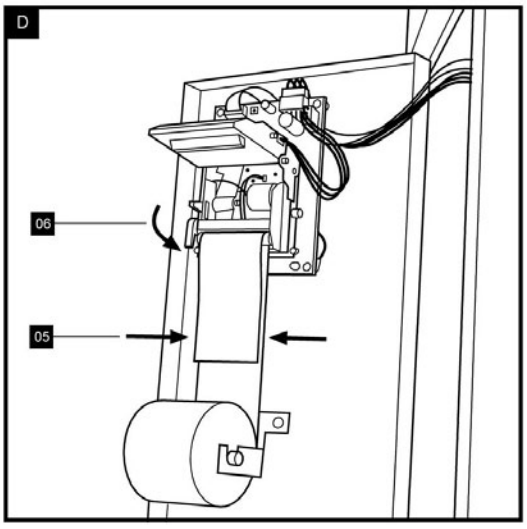


1. Place the paper roll

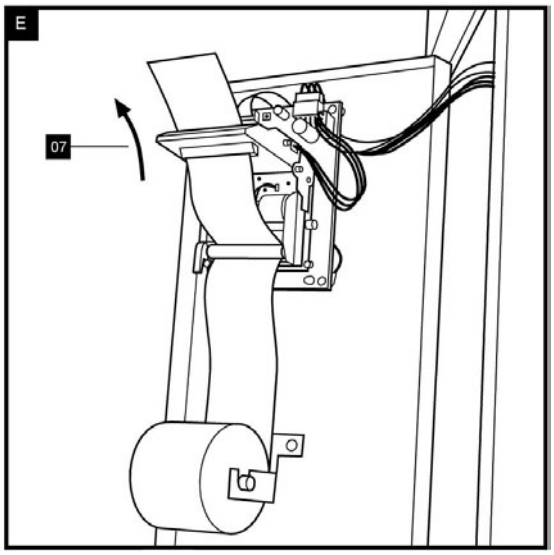


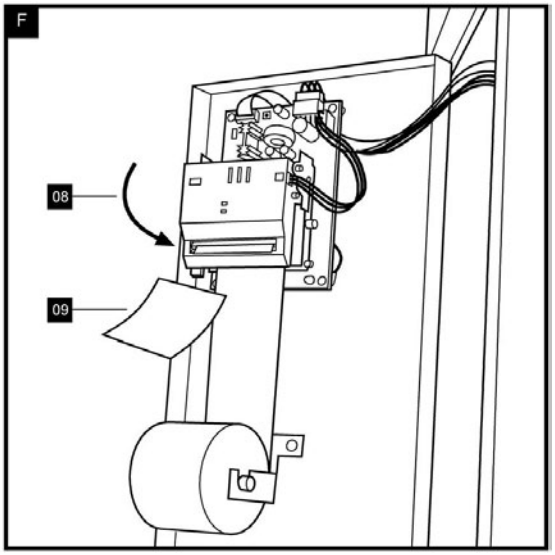
2. Lift the cutter cover
3. Raise the lever





4. Insert the paper through the roller according to Figure
5. Make sure the paper is straight and in the centre
6. Lower the lever

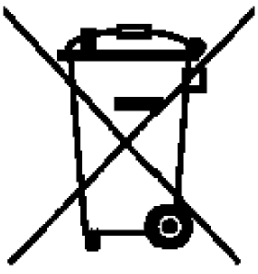




7. Insert the paper through the cutter as in the Figure
8. Close the cover
9. Cut off the piece of paper sticking out
10. Switch on the equipment

5.3. EQUIPMENT DISPOSAL

All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.



This crossed-out wheeled bin symbol on the product means the product is covered by the European Directive 2002/96/EC.

The correct disposal and separate collection of the equipment will help prevent potential negative consequences for the environment and human health. It is a precondition for reuse and recycling of used electrical and electronic equipment.

6. TECHNICAL SPECIFICATIONS

Model:	MILLENNIUM I
Manufacturer:	DAVI & CIA C/Murcia 35 nave G E08830 Sant Boi de Llobregat Barcelona – SPAIN
Display:	LCD Graphic 240 x 64 pixels - 127 x 34 mm
Weight:	63 kg (aprox.)
Maximum external dimensions:	70 x 45 x 230 cm
Measurement range: Weight: Weight (baby scale): Height: Blood pressure: Heart rate: Body fat index:	 10 to 225 kg in div.100 g 0 to 15 kg in div. 10 g 0 to 200 cm in div. 1 cm 0 to 300 mmHg in div. 1 mmHg 40 to 200 ppm 1 to 75 % in div. 0,1 %
Measurement methods: Weight: Height: Blood pressure: Body fat index:	 300 kg load cell Ultrasound Oscillometric method Bioelectric Impedance Measurement (B.I.A.)
Power supply:	230V~ , 50/60 Hz 120V~, 50/60 Hz
Consumption:	In operation, max. 40 VA
In operation: Body fat index: Temperature: Humidity: Other parameters: Temperature: Humidity:	 +15 °C to +40 °C 30 % to 75 % 0 °C to +40 °C 30 % to 75 %
Printer:	Thermal printhead 8 dots/mm. 384 dots/line, 32 characters per line. Speed = 40 mm/s. Paper end detection using a photoelectric cell.
Paper width:	57 mm (57 x 192 x 17.5 mm)
e: d: Min: Max. Class:	100 g / 0,2 lb 100 g / 0,2 lb 2,5 kg / 5,5 lb 225 kg / 500 lb III
Fuses primary circuit: Power supply 230V: Power supply 115V: Fuses secondary circuit:	 2 x 0,5 A 5 x 20 mm, type M 2 x 1,0 A 5 x 20 mm, type M 2 x 2 A 5 x 20 mm, type M

7. WARRANTY CERTIFICATE

We provide a **1-year** guarantee from the date of purchase. The guarantee covers manufacturing defects or defects occurring as a result of normal use and operation.

It excludes all removable parts such as batteries, wires, power supply devices, etc. Faults falling within the guarantee period shall be rectified free of charge upon presentation of the purchase receipt for the appliance. No other rights can be taken into consideration.

Return shipment is at the customer's expense if the appliance is anywhere other than at the customer's headquarters.

In the event of damage during shipment, guarantee rights will be granted only if the appliance is shipped in the original packaging. You are therefore recommended to keep the original packaging.

Following expiry of the guarantee period, all services requested will be dealt with by our specialist technicians at the user's expense.

This manual and other support documents are available on the web

www.davicia.com

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